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WS 1171
DEVELOPMENT PLAN
FOR PROGRAM ACCELERATION

CONTRACT AF 04(667)-97

LOCKHEED AIRCRAFT CORPORATION
MISSILE SYSTEMS DIVISION
SUNNYVALE, CALIFORNIA

INTRODUCTION

The WS-117L program now under development has as its objective the provision of complete reconnaissance systems utilizing satellite borne sensing devices. The material here represents a development plan for accelerating this program, and has been prepared by the Lockheed Missile Systems Division in its role as the WS-117L Weapon System Contractor.

In the course of negotiations on 12 to 19 November 1957 for the WS-117L definitive contract, it was requested by AFBD personnel that Lockheed consider modification of the program for a potential acceleration. Included was consideration of increasing the tempo of vehicle firings to assure greater probability of program success and to reduce the development time scale of a first Pioneer Visual flight capability by one year to March 1960. Subsequently it was requested that consideration be given to developing the Pioneer Ferret system to a time scale comparable to that of the Visual.

In view of recent emphasis on missile weapon systems, it appeared appropriate to the Contractor to consider the inclusion of two alternate approaches in the development program: (1) The use of an IRBM missile as a booster, and (2) The physical recovery of reconnaissance photographs from the orbiting vehicle. Both approaches have been a part of the Contractor's over-all program concept from its inception but had been shelved due to initial funding limitations. The combination of the two approaches will provide a system attaining very early reconnaissance capability. This is quite similar to a method proposed recently by the RAND Corporation using the Thor as a booster and a panoramic camera, in a spin-stabilized recoverable capsule, on orbit.

The over-all program presented here is essentially the same as that presented to AFBD on 27 November and 5 December 1957, but incorporates the RAND concept for early Thor-boosted reconnaissance flights.

The Contractor believes strongly that should additional funds be available for enhancement of the U. S. military program, consideration should be given to augmentation of the present WS-117L program in the manner and amount shown in Figure 1. This would allow capitalization of the established broad WS-117L base toward expeditious accomplishment of its military objectives. Expanding the vehicle firing rate from four to ²⁰ ~~14~~ by Feb. 1960 will allow a more efficient utilization of the system, increase ultimate reliability, and bring about earlier reconnaissance capability.

P.R.C.

6 11 30 AM

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PLEASE CALL COLONEL HUGHES, 2224, OR LT COL BOGERT, 2224
AND ASK ONE OF THEM TO COME TO THIS MACHINE. WE WILL SEND
YOUR MESSAGE WHILE YOU ARE CONTACTING THEM, AND THEN STAND BY FOR THEIR
REPLY. THEN WE HAVE A SECOND MESSAGE FOR MAJOR ZELIKA OR HIS
ASSISTANT /INWDTR/. YOU MIGHT ALERT THEM TO BE READY AT THE
MACHINE.

THE DUPUTY COMMANDER/WEAPON SYSTEMS IS PREPARING THE ARDC
FIVE YEAR PROJECTED ASTRONAUTICS PROGRAM/ WEAPON SYSTEM/ FOR
DELIVERY TO GENERAL PUTT WITHIN THE NEXT FEW DAYS. THE AFBMD
HAD ALREADY FURNISHED MATERIAL FOR THIS PAPER. ATTACHED TO THE
PAPER WILL BE A SET OF SUMMARY SHEETS SHOWING WHAT WEAPON SYSTEMS
ARE IN BEING, OR PLANNED, WITHIN THE ASTRONAUTICS AREA. EACH
PAGE COVERS ONE WEAPON SYSTEM, COTLINED AS FOLLOWS CLN

A. BRIEF

1. DESCRIPTION / TWO LINES OR LESS/
2. CAPABILITY /TWO LINES OR LESS/
3. EXISTING TECHNOLOGY USED / TWO LINES OR LESS/
4. PRINCIPAL TECHNICAL PROBLEMS / TWO LINES OR LESS/

B. R AND D SCHEDULE

1. DEVELOPMENT PERIOD / SHOW END DATE/
2. FLIGHT TEST PERIOD / SHOW END DATE/
3. OPERATIONAL SYSTEM DELIVERY DATE

C. FUNDING /FOR FY 58 AND FY 59/

1. P-600
2. NON-600
3. TOTAL

WE HAVE BEEN ASKED TO PREPARE FOUR OF THESE SHEETS ON A CRASH
BASIS FOR PRESENTATION TO GENERAL ANDERSON THIS AFTERNOON. THESE
SHEETS COVER
THOR

ATLAS

ITAN

SOLID IRBM

WE HAVE ALL THE INFORMATION WE NEED ON THOR, ATLAS, AND TITAN EXCEPT
FOR THE R AND D SCHEDULE DATES. WE NEED END DATES, FOR EACH WEAPON,
ON DEVELOPMENT, FLIGHT TEST, AND OPERATIONAL SYSTEM DELIVERY.
IN ADDITION, WE NEED ALL THE LISTED DATA ON THE SOLID IRBM. CAN YOU
MAKE THIS AVAILABLE TO US ON THIS TELETYPE WITHIN THE NEXT few HOURS GIVE

MAJOR FIEKER, RDZPI, HAS BEEN DIRECTED TO PREPARE INFORMATION
SIMILAR TO THAT CITED ABOVE, IN OUR MESSAGE TO COLONEL HUGHES. HERE
ARE MAJOR FIEKER'S QUESTIONS CLN

1. WHAT IS PRESENT FY PLAN FOR FG SITE OPS

2. PROVIDE ESTIMATE OF COST FOR ACQ-LIFE CYCLE, IF NOT
INCLUDED IN PRESENT PLAN FOR FG SITE OPS

3. WHAT ARE YOUR PLANS FOR A PROGRAMMING
SATELLITE LAUNCH IN THE FUTURE? DO YOU HAVE
A SATELLITE CURRENTLY IN THE PLANS?

RE THE OFFICERS TALKED YET JA FLS
NEGATIVE 20J

GR

MD

FOR ITEMS B 1 AND 2 YOU ARE REFERRED TO VOLUME 1 OF THE DEVELOPMENT
LANT DAEEEF PLAN DATED 1 OCT.

WITH RESPECT TO THE INFORMATION REQUIRED ON THE SOLAR TUBE
WE WILL ANSWER IN 2 HOURS

THAT IS ALL FOR HERE STAND BY FOR MAJ ZEPENKA

FOR COL MUGHES

HAVE CHECK VOL 1 OF THE DEVELOPMENT PLAN
AND IT IS CLEAR THAT THE ATLAS AND TITAN SYSTEM OFFICERS
USED DIFFERENT DEFINITIONS FOR THE WORD DEVELOPMENT. FOR
EXAMPLE USING VOL 1 IT WOULD APPEAR THAT ATLAS DEVELOPMENT
WILL BE FINISHED ABOUT A YEAR LATER XXXX LATER THAN TITAN.
I HESITATE TO SHOW THIS ON A SCHEDULE, AND THAT'S WHY I
WOULD APPRECIATE UR VERISION OF THE DATES . I HAVE THE
SAME PROBLEM WITH THE TEST DATE CAN U HELP ME GUESS

JA FLS

MD

OKAY WE WILL ALSO HAVE TO WORK ON IT IN THE MEAN TIME IF SO PLEASE

THANKS A LOT WE WILL STAND BY FOR MAJ ZEPENKA